AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-24 (Canceled)

25. (Previously Presented) A gas injector for supplying process gas to a plasma processing chamber wherein a semiconductor substrate is subjected to plasma processing, the gas injector comprising:

gas injector body of dielectric material and sized to extend through a chamber wall of the processing chamber such that an axial distal end surface of the gas injector body is exposed within the processing chamber, the gas injector body including a plurality of gas outlets adapted to supply process gas into the processing chamber, wherein the gas outlets are located in the axial distal end surface of the gas injector body and the gas outlets are sized to inject the process gas at a subsonic, sonic or supersonic velocity.

Claims 26-27 (Canceled)

28. (Previously Presented) The gas injector of Claim 25, the gas outlets include a center gas outlet extending in the axial direction and a plurality of angled gas outlets extending at an acute angle to the axial direction.

29. (Previously Presented) The gas injector of Claim 25, wherein the gas injector includes a planar axial end face which is dimensioned so as to be flush with an interior surface of a dielectric window forming the chamber wall.

30. (Previously Presented) The gas injector of Claim 29, wherein the gas injector includes at least one seal adapted to contact the dielectric window when the gas injector is mounted in the dielectric window.

31. (Previously Presented) The gas injector of Claim 25, wherein the gas outlets include a plurality of angled gas outlets which inject process gas at an acute angle relative to a plane parallel to the distal end surface.

32. (Previously Presented) The gas injector of Claim 25, wherein the gas injector is adapted to be removably mounted in an opening in the chamber wall and includes at least one O-ring providing a vacuum seal between the gas injector and the chamber wall.

33. (Previously Presented) The gas injector of Claim 25, wherein the gas injector body includes a surface adapted to overlie an outer surface of the chamber wall.

34. (Previously Presented) The gas injector of Claim 25, wherein the gas injector body includes an annular flange adapted to overlie and contact an outer surface of the chamber wall.

35. (Previously Presented) The gas injector of Claim 25, wherein the gas injector body includes at least one O-ring seal on an outer surface of the gas injector body.

36. (Previously Presented) The gas injector of Claim 25, wherein the gas injector body includes a first O-ring seal on an outer surface of the gas injector body and a second O-ring seal in a surface of a flange extending from the outer surface of the gas injector body.

37. (Previously Presented) The gas injector of Claim 25, wherein the distal end of the gas injector body is substantially planar.

38. (Previously Presented) The gas injector of Claim 25, wherein all of the gas outlets supply process gas through the distal end of the gas injector body.

39. (Currently Amended) A gas injector for supplying process gas to a plasma processing chamber wherein a semiconductor substrate is subjected to plasma processing, the gas injector comprising:

gas injector body sized to extend through a chamber wall of the processing chamber such that an axial distal end surface of the gas injector body is exposed within the processing chamber, the gas injector body including a plurality of gas outlets adapted to supply process gas into the processing chamber and a cylindrical bore adapted to supply gas to the gas outlets, the cylindrical bore being defined by a

sidewall and an endwall which extends radially inwardly from the sidewall, the gas outlets including a center gas outlet extending from the endwall in the axial direction and a plurality of angled gas outlets extending from the endwall at an acute angle to the axial direction, wherein the gas outlets are located in the axial distal end surface of the gas injector body;

an annular flange adapted to overlie and contact an outer surface of the chamber wall; and

a first O-ring in a surface of the flange for sealing against the outer surface of the chamber wall.

40. (Previously Presented) The gas injector of Claim 39, comprising a second O-ring seal on an outer surface of the gas injector body.

41. (Previously Presented) A gas injector for supplying process gas to a plasma processing chamber wherein a semiconductor substrate is subjected to plasma processing, the gas injector comprising:

a gas injector body sized to extend through a chamber wall of the processing chamber such that an axial distal end surface of the gas injector body is exposed within the processing chamber, the gas injector body including a plurality of gas outlets adapted to supply process gas into the processing chamber, wherein the gas outlets are located in the axial distal end surface of the gas injector body and the gas outlets being sized to inject the process gas at a subsonic, sonic or supersonic velocity, wherein the gas injector body includes a uniform diameter central bore adapted to supply gas to the gas outlets, the central bore extending axially from an

upper axial end face of the gas injector body, the central bore being defined by a cylindrical sidewall and a flat endwall extending between the cylindrical sidewall, inlets of the gas outlets being located on the flat endwall.

42. (Previously Presented) A gas injector for supplying process gas to a plasma processing chamber wherein a semiconductor substrate is subjected to plasma processing, the gas injector comprising:

gas injector body made of a dielectric material selected from the group consisting of quartz, alumina and silicon nitride and sized to extend through a chamber wall of the processing chamber such that an axial distal end surface of the gas injector body is exposed within the processing chamber, the gas injector body including a plurality of gas outlets adapted to supply process gas into the processing chamber, wherein the gas outlets are located in the axial distal end surface of the gas injector body and the gas outlets being sized to inject the process gas at a subsonic, sonic or supersonic velocity.

43. (Previously Presented) The gas injector of Claim 28, wherein the gas injector body includes 8 of the angled gas outlets.

44. (Previously Presented) The gas injector of Claim 28, wherein the acute angle is 10 to 70°.

45. (Previously Presented) The gas injector of Claim 28, wherein the angled gas outlets direct the process gas such that the process gas does not flow directly towards a substrate being processed.